

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 February 2005 (17.02.2005)

PCT

(10) International Publication Number
WO 2005/014977 A1

(51) International Patent Classification?: **E21B 49/08,**
G01N 27/26

(21) International Application Number:
PCT/GB2004/003040

(22) International Filing Date: **12 July 2004 (12.07.2004)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
0317260.8 24 July 2003 (24.07.2003) GB

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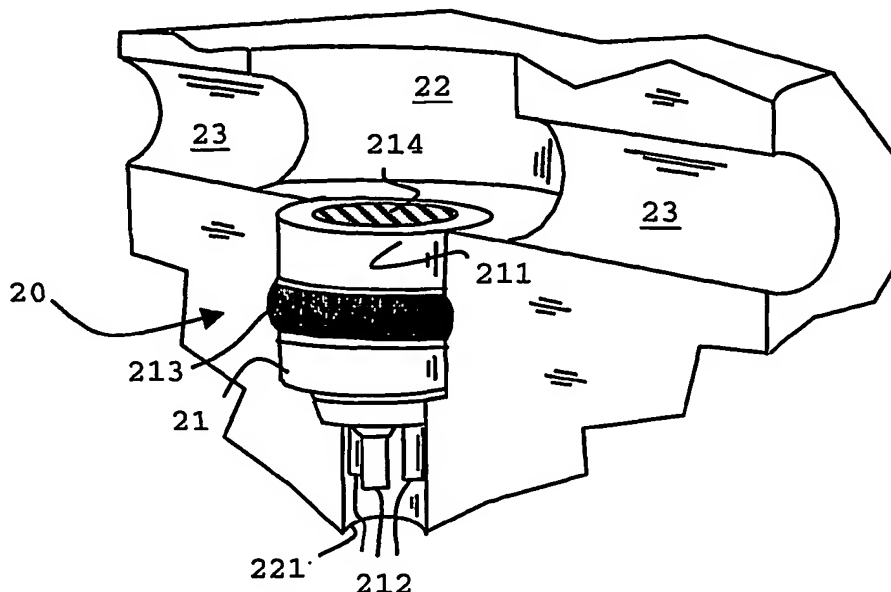
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.**

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): **ARIPO (BW, GH,**

[Continued on next page]

(54) Title: **APPARATUS AND METHOD FOR MEASURING CONCENTRATIONS OF SCALE-FORMING IONS**



(57) Abstract: This invention relates to methods and apparatus for determination of ion concentrations, particularly in downhole water from hydrocarbon wells, aquifers etc. It is useful in a wide range of applications, including predicting the formation of scale and fingerprinting waters from different sources. More particularly, the invention relates to the use of ligands whose electronic configuration is altered by the binding of the scaling ions within a water sample. These alterations are detected, for example by electrochemical means, and are indicative of the concentration of scaling ions in the sample.

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GM, KI, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NI, SN, TD, TG).

Published:

— with international search report

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